CITY PLANNING DEPARTMENT
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BERKELEY, CALIFORNIA

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ECONOMIC ANALYSIS

RAPID TRANSIT STATION AREAS AIR-RIGHTS

Berkeley, California

By: DEVELOPMENT RESEARCH ASSOCIATES
REAL ESTATE ECONOMICS & APPRAISAL
Los Angeles, California

DEVELOPMENT RESEARCH ASSOCIATES
731 SOUTH FLOWER STREET • LOS ANGELES, CALIFORNIA 90017
(AREA CODE 213) 626-2342 CABLE ADDRESS: DVELSEARCH

July 12, 1967
1634.01/10

Okamoto/Liskamm
300 Broadway
San Francisco, California 94133

Attention: Mr. William Liskamm

Gentlemen:

We are pleased to submit to you our economic analysis of the development of the Berkeley Station Air Rights.

The major objective of this report is to provide, in regard to these air spaces, a broad economic background for prospective development and the potential demand for such, along with the approximate cost of construction of buildings, and the market value for the air rights.

In this report, we have carefully assessed the economic considerations and arrived at definitive conclusions regarding development and demand.

SUMMARY AND RECOMMENDATIONS OF THE REPORT:

1. Current economic trends in the Bay Area include a significant increase in population since 1960, with the suburban areas increasing at a faster rate than the older, urban areas. The latter, however, appear to be retaining their employment and retail dominance.

2. Berkeley is an older, but well maintained, urban community with a variety of cultural activities which makes the city attractive to a large number of people.

3. The Bay Area Rapid Transit system will be in operation by 1970 serving 37 stations, three of which are located in the City of Berkeley. One of these three (Berkeley CBD), will be predominately pedestrian and bus-oriented, while the other two will be largely parked-auto and bus oriented.

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4. Several areas along the transit line, in Berkeley, were analyzed in regard to the possible impact of rapid transit, but the sites studied in detailed depth were the North Berkeley Station, the Hearst Strip, and the South Berkeley Station areas.

5. An analysis of the impact of rapid transit on surrounding land uses in Toronto indicates that rapid transit appeared to have the following impact:

   a. Residential Land Use: Residential land uses have tended to locate either within walking distance of the station (0-5 blocks) or in clusters more distantly removed but still accessible by surface feeder transit (10-15 blocks). These clusters are generally located around or near some desirable residential feature (park; school; recreational area; etc.).

   b. Retail Land Use: Downtown retail uses appear to have been strengthened by the introduction of rapid transit and the transit system, no doubt, has prevented an exodus to the suburbs -- characteristic of retail development in other cities. Smaller retail users along the transit route were initially hurt by the introduction of rapid transit, although most of them have generally recovered or relocated. The effect was particularly acute in areas between distant stops as no parallel surface transportation was offered. It was just as easy for the shopper to take transit downtown as shop in the local neighborhood.

      Another basic trend in retail land use along the transit line has been from shoppers to convenience goods as residential densities are increased and the competition of downtown becomes more acute.

   c. Office Land Use: Rapid transit appears to have two basic effects on office land uses. Downtown office areas have tended to be strengthened with the construction of several new office buildings. Transit has also encouraged office construction in areas near the fringe of the core where the developer can offer lower rental rates and yet maintain the face-to-face contact of the CBD.

6. In the Toronto experience, several factors appeared to determine the degree to which rapid transit would have an impact on areas surrounding the stations. The most important factors appeared to be:

   a. Existence of heavily traveled east-west surface feeder lines: Toronto authorities find that a commuter or shopper will transfer once between surface transit and subway but rarely more often.

   b. Availability of large parcels of land in single ownership: This factor is mitigated somewhat, however, by the increasing use of air rights for development activity.

   c. Location of the station in relation to the downtown area: This has been a major factor in office building location. Developers find that they can purchase land at considerably lower cost in non-core areas and yet offer the prospective tenant the face-to-face contact traditionally associated with a Central Business District.

   d. Pre-existence of a desirable residential or commercial environment: Areas of greatest prestige (regardless of land use) received the greatest amount of development activity.

7. As the result of our evaluation of current economic trends in Toronto and the Bay Area, we anticipate the following general patterns along the Berkeley transit route:

   a. Residential Land Uses: Rapid transit will have a major impact on residential land uses in terms of stimulating density changes early in many sections of Berkeley. The greatest initial impact should be seen along the Hearst Strip near the North Berkeley Station site giving rise to higher residential densities, particularly in immediately adjacent areas.

   b. Commercial Land Use: The impact of rapid transit on commercial land uses will vary considerably in relation to the specific sub-area and the kinds of commercial uses involved. Generally speaking, however, an increase of

downtown - shopper goods facilities and commercial - office sites should occur most significantly around the Downtown station. In addition, lower-rent office space should be stimulated in the fringe area along the transit line between the South and Downtown stations.

Please contact us in regard to any questions pertaining to this report.

We wish to express our appreciation for your assignment in developing this material and sincerely hope that the report meets with your approval.

Sincerely,

DEVELOPMENT RESEARCH ASSOCIATES

Edgar L. Law, Jr.
Associate

Jay W. Natelson
Associate

John W. McMahan
Director

ELL:JWN:JWM:mcp

ECONOMIC ANALYSIS

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Berkeley, California

TABLE OF CONTENTS

Study Background and Objectives 1
Land Uses Under Consideration 1
Primary Research 2
Secondary Research 2
The Regional Setting 3
Population 3
Income 6
Employment 8
Retail Sales 8
Summary and Conclusions 11
Future Population Growth Demand 11
Summary and Conclusions 19
Other Areas along Transit Route 21

APPENDIX

PLATES

1. Comparative Population Growth 5
2. Rapid Transit Route showing Study Areas 16

TABLES

1. Comparative Populations of Alameda County and the City of Berkeley, 1940-1966 with Preliminary Projections to 1990 . . . 4
2. Per Capita Income, San Francisco Bay Area 6
3. Population San Francisco Bay Area 7
4. Employment San Francisco Bay Area 9
5. Retail Sales San Francisco Bay Area 10
6. New and Replacement Dwelling Units, Projection for the City of Berkeley 13
7. Selected Economic and Physical Data, Berkeley Rapid Transit Station Sites 16
8. Development Schedule, Berkeley Rapid Transit Air Right Sites . 18

STUDY BACKGROUND AND OBJECTIVES

Early in 1967, the Transit Impact Planning Committee and the Berkeley Department of City Planning initiated a study of the areas along the rapid transit lines within the City of Berkeley. The major objective of this study was to analyze the impact of Rapid Transit on the station areas and the economic feasibility of development of the air rights over the station sites.

Although an exhaustive amount of research had been previously undertaken in connection with engineering and financial feasibility of the BART system, relatively little effort had been directed towards measuring the economic impact of the system on land areas along the transit lines. As this type of information was of vital interest to the Transit Impact Planning Committee members, it was determined that a preliminary economic impact study of these sites should be undertaken. The firm of Development Research Associates was retained for this purpose. The economic consultants were asked to explore the general impact of transit on the North and South Berkeley Station areas as well as indicate the feasibility of developing the air rights over these properties.

LAND USES UNDER CONSIDERATION

During the course of the study, the following land uses were analyzed:

- Residential
  - Low Density Residential (0-50 persons per acre)
  - Medium Density Residential (50-80 persons per acre)
  - High Density Residential (80-150 persons per acre)
  - Specialized Residential (retirement housing; medical staff housing, etc.)
- Commercial
  - Retail Commercial (convenience and shoppers goods)
  - Office Commercial (medical, research, and general)
- Institutional

- Other

Although the land uses outlined above represent the overall scope of analysis, the specific land use evaluated within any one study area is dependent upon the nature of the area, existing uses, and the anticipated future land use demand.

PRIMARY RESEARCH

In approaching this assignment, several primary research techniques were utilized--as follows:

1. Generalized field survey of major existing land uses in the study areas.

2. Field inspections and discussions with rapid transit and planning officials in Cleveland, Toronto, and Montreal.

3. Current experiences in rapid transit system development in Seattle, the San Francisco Bay Area and Los Angeles, and our consequent current information and concern of current transit techniques throughout the world.

4. Discussions with developers, government officials, and other parties interested in future development in Berkeley.

Development Research Associates also views its continuing experience in the field of economic analysis and market research as a major source of primary information.

SECONDARY RESEARCH

In addition to the primary research techniques outlined above, a considerable degree of research effort was directed toward the review and evaluation of secondary data. The following areas comprised the major portion of this effort:

1. Review of basic economic data relating to the growth and development of the Bay Area in general, and the City of Berkeley in particular. Areas of evaluation included population growth, population characteristics, and employment.

2. Field inspection of development along the rapid transit line in Berkeley.

3. Review of pertinent economic reports prepared by other consultants.

4. Review of data developed in connection with the formulation and operation of the BART system.

In utilizing secondary data, it is our firm belief that the value of the data lies not only in the validity of the source of the statistical information, but also in the manner in which it is interpreted. It is our policy, therefore, to carefully evaluate secondary data, both as to its source and applicability, prior to utilizing it as an integral part of a study. In instances where we believe statistical adjustment is necessary to make the figures more meaningful, we will do so and indicate accordingly. In situations where future projections are involved or they are somewhat dated, it is our policy to utilize the more conservative figure.

THE REGIONAL SETTING

The nine counties* comprising the Bay Area today represent the fifth largest metropolitan complex in the nation. The economic interrelation between the various portions of this urban complex bear directly on the problems, limitations and potentialities of the Berkeley area. We, therefore, believe it desirable that we understand the present economic trends in the Bay Area prior to proceeding with a discussion of the impact of rapid transit on the future growth of Berkeley. Therefore, we will first consider population, income,and employment.

POPULATION

One of the most difficult elements of economic analysis is to make meaningful comparisons between widely varying portions of large metropolitan areas. This task is further complicated when many of the areas are increasing in population at the same time. To compare growth rates is generally misleading because sparsely settled areas have small numerical bases thereby producing lopsided percentage growth rates when only a small number of new residents are introduced. Comparisons of changes in density patterns are also subject to criticism because the selection and interpretation of the land base often disguises indications of true growth in an area.

*Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano and Sonoma counties.

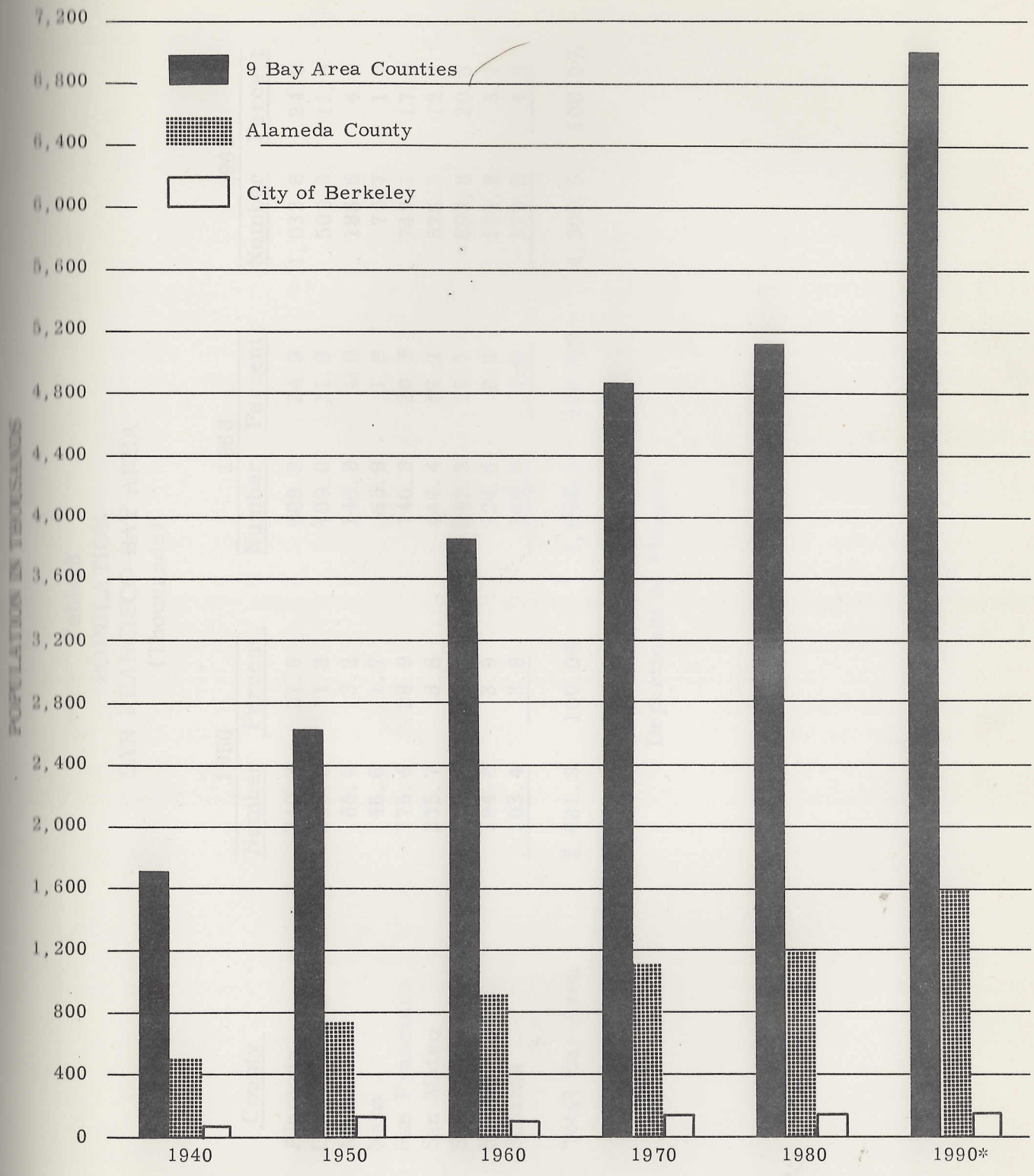
Table 1
COMPARATIVE POPULATIONS OF ALAMEDA COUNTY
AND THE CITY OF BERKELEY, 1940-1966
WITH PRELIMINARY PROJECTIONS TO 1990

	Estimated			Projected			BARTD Population Projections	
	1940	1950	1960	1970	1980	1990	1970	1990
9 Bay Area Counties	1,734,308	2,681,322	3,774,200	4,850,500	5,156,800	7,732,000	4,788,000	7,000,000
Alameda County	513,011	740,315	908,209	1,134,100	1,358,200	1,572,000	1,233,000	1,780,000
City of Berkeley	85,547	113,805	111,268	125,000	135,000	142,000	135,000	160,000
Percentage of County Population in the City of Berkeley	16%	15%	12%	11%	10%	9%	11%	9%

Source: California State Department of Finance

Plate 1

COMPARATIVE POPULATION GROWTH



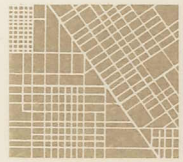
*BARTD Projections

Source: State Department of Finance, Development Research Associates

Table 3
POPULATION
SAN FRANCISCO BAY AREA
(Thousands)

County	1950		1960		1965	
	Number	Percent	Number	Percent	Number	Percent
Alameda	740.3	27.6	908.2	24.9	1,032.6	24.0
Contra Costa	299.0	11.2	409.0	11.9	509.6	11.8
Marin	85.6	3.2	146.8	4.0	188.6	4.4
Napa	46.6	1.7	65.9	1.8	75.7	1.7
San Francisco	775.4	28.9	740.3	20.3	743.1	17.0
San Mateo	235.7	8.8	444.4	12.2	526.9	12.3
Santa Clara	290.5	10.9	642.3	17.7	893.8	20.8
Solano	104.8	3.9	134.6	3.2	159.8	3.7
Sonoma	103.4	3.8	147.4	4.0	179.5	4.3
Total Bay Area	2,681.3	100.0%	3,638.9	100.0%	4,309.5	100.0%

Source: U. S. Census; California State Department of Finance



The 1964 per capita income in the Bay Area was $2,810, which was somewhat lower than the statewide average of $3,010. San Francisco County had the highest per capita income ($4,190), followed by San Mateo ($3,310), Alameda ($3,185), Santa Clara ($2,769) and Marin ($2,740).

EMPLOYMENT

Table 4, on the following page, indicates the growth in Bay Area employment since 1950. In 1964, there were 1,609,500 jobs in the nine Bay Area counties. This represented an average annual increase of approximately 18.0% since 1960 and was significantly greater than the increase in population for the same period. This would indicate that employment opportunities were increasing at a considerably faster rate than population growth during this four-year period. This is also supported by the drop in the number of persons-per-job from 3.9 in 1960 to 2.9 in 1964.

In terms of individual county employment growth, the most striking improvement in relative position has occurred in Santa Clara County which increased from 8.7% of the total Bay Area in 1950 to 18.8% in 1964. Other increases in relative position were registered by San Mateo County (from 6.1% to 9.8%), Marin County (1.3% to 2.6%), and--more recently--by Solano and Sonoma Counties. Relatively little change in relative position occurred in Contra Costa, with mild declines in Alameda and Napa counties. San Francisco, although increasing in absolute employment, experienced a decline in relative position from 45.8% in 1950 to 30.0% in 1964. It should be noted that the severity of decline in relative employment was considerably less than the decline in relative population and that San Francisco is still the major employment center in the Bay Area.

RETAIL SALES

Retail sales information relating to Bay Area counties appears in Table 5. Although data was not available for 1950, information for 1960 and 1964 indicates an average annual increase of 6.9% during the four-year period.

In terms of changes in relative position, Santa Clara demonstrated the greatest increase, followed by San Mateo, Contra Costa and Marin counties. Napa, Solano and Sonoma counties remained relatively static, with San Francisco declining from 30.8% to 26.3%. It is interesting to note that the magnitude of changes in relative position of retail sales was much less than the changes in population and employment during this period. This would indicate that the more urban areas are in a relatively strong position to retain their retail position even if they may lose ground in terms of population and employment.

Table 4
EMPLOYMENT
SAN FRANCISCO BAY AREA
(Thousands)

County	1950 Number	1950 Percent	1960 Number	1960 Percent	1965 Number	1965 Percent
Alameda	178.8	25.6	223.5	23.8	388.2	24.1
Contra Costa	53.2	7.6	66.5	7.2	123.1	7.7
Marin	10.0	1.3	18.1	1.9	43.3	2.6
Napa	5.7	0.8	8.1	0.9	10.1*	0.6
San Francisco	320.6	45.8	337.0	36.0	482.2	30.0
San Mateo	43.0	6.1	92.4	9.9	157.1	9.8
Santa Clara	60.7	8.7	153.7	16.4	301.6	18.8
Solano	11.0	1.6	14.0	1.5	48.2	2.9
Sonoma	16.7	2.5	22.5	2.4	55.7	3.5
Total Bay Area	699.7	100.0%	935.8	100.0%	1,609.5	100.0%
Average Annual Increase				3.4%		19.0%
Persons/Job	3.8		3.9		2.9	

*Estimated

Source: California State Department of Employment

Table 5

RETAIL SALES*

SAN FRANCISCO BAY AREA

(Thousands)

County	1950 $	1950 %	1960 $	1960 %	1964 $	1964 %
Alameda	NA	NA	$1,455.6	25.5	$1,834.0	25.2
Contra Costa	NA	NA	418.5	7.3	589.2	8.1
Marin	NA	NA	160.2	2.8	234.0	3.2
Napa	NA	NA	67.2	1.2	89.4	1.2
San Francisco	NA	NA	1,753.4	30.8	1,914.1	26.3
San Mateo	NA	NA	616.9	10.8	859.1	11.8
Santa Clara	NA	NA	922.3	16.2	1,323.3	18.2
Solano	NA	NA	126.0	2.2	174.2	2.4
Sonoma	NA	NA	179.9	3.2	253.6	3.5
Total Bay Area	NA	NA	$5,700.0	100.0	$7,270.9	100.0
Average Annual Increase	--			---		6.9%

*Taxable Items Only

Source: California State Board of Equalization
Development Research Associates

SUMMARY AND CONCLUSIONS

In summarizing our brief discussion of the San Francisco Bay Area, we can note the following:

1. The population growth of the Bay Area since 1960 has been significantly greater than the decade of the 1950s.

2. The major changes in population position within the Bay Area have generally involved an increase in the position of the suburban counties with the exurban counties remaining relatively static.

3. The changes in relative position of employment and retail sales have not been as dramatic as the changes in population. This would indicate that, although the urban areas lose population, it does not necessarily mean they will lose employment or retail sales activity.

FUTURE POPULATION GROWTH DEMAND

Examination of the economy of Berkeley and the relations of the city to other parts of the San Francisco Bay Area indicated that population growth in Berkeley is to a large degree independent of economic developments there. Berkeley is conveniently located for commuting both to San Francisco and to other parts of the East Bay. About half of the employed residents are now commuters.

The location of the University of California at Berkeley is a most distinctive feature of the city's economy on the most important factor in its economic growth. While the Berkeley campus is not expected to expand substantially, it is assuming a growing role as a center for graduate studies. This will require higher levels of expenditures in coming years. Because of the quality of personnel, the University has attracted large shares of federal research funds which have in turn spurred establishment of nuclear and electronic research facilities in the area. The University has also stimulated a variety of cultural activities which have enhanced the city's reputation.

Berkeley is an attractive residential city and can expect to draw population from the very large and growing group of persons who work within commuting distance. This group is so large in relation to Berkeley, and its growth is so

dynamic, that detailed analysis is not required to demonstrate that the economic basis is present for a very large population growth. Within the city the expansion of the university, alone, will afford jobs that would support a considerable population growth, and new jobs in other sectors of the economy are also in prospect. The combined effects of external and internal factors show potential growth much larger than Berkeley is likely to be able to accommodate through expansion of its living quarters. The supply of dwelling units, rather than the availability of people, appears clearly to be the determining factor in Berkeley's population growth. A war or serious economic depression could change this outlook. However, for purposes of this study, it has been assumed that neither of these events will occur and that a high level of defense activity will continue.

The number of dwelling units in Berkeley rose from 37,460 in 1950, to 41,558 in 1960. In these time periods, substantially more than half of the units were occupied by tenants rather than owners. The preponderance of rentals has increased since 1950 through the construction of many more units in multiple dwellings than in single family houses. (New construction since 1950 has been mostly duplexes and apartments, while additions to existing structures represent three-fourths of the units.) Construction of apartments has been increasing steadily year by year.

The trend toward apartment construction reflects a growing shortage of available residential building lots in Berkeley. A few lots can be found in the hilly areas but a considerable portion of these lots are on very steep slopes, and some are in areas of unstable soil conditions, which entails risks in building.

Much of the new apartment construction is occurring in the vicinity of the university, which is convenient to Downtown Berkeley and to commuter transportation, and also areas near the proposed South Berkeley transit station. To provide a site in these areas means razing an existing house. The small size of lots and the necessity to acquire and remove a house in preparation of an apartment site makes the land cost quite high. In addition, the off-street parking requirements for apartment buildings limit the number of units which can economically be built on a lot. For this reason, massive apartment structures do not appear likely in Berkeley unless they are developed within the air-rights purchased by the City from the Bay Area Rapid Transit District.

The estimated increase in population for the City of Berkeley is expected to be 21% over 1960 figures by 1970, 33% by 1980, and this growth will continue to 44% by 1990, representing an increase in population of some 48,000 to 50,000 persons in the City of Berkeley. This increase in population will demand from 15,600 to 18,600 dwelling units. A breakdown in spans of ten year periods is shown on the following page. We must point out, however, that 3,886 units (University units included) were constructed during the years 1960 to 1965.

Table 6
NEW AND REPLACEMENT DWELLING UNITS
PROJECTION FOR THE CITY OF BERKELEY

Year	Dwelling Units					
	Replacement		New		Total	
	Low	High	Low	High	Low	High
1961-1970	5,600	6,300	2,400	2,700	8,000	9,000
1971-1980	2,800	3,500	1,200	1,500	4,000	5,000
1981-1990	2,520	3,220	1,080	1,380	3,600	4,600
Total	10,920	10,020	4,680	5,580	15,600	18,600

Source: Development Research Associates

Air Rights Development: The air rights at the North and South Berkeley Rapid Transit Station sites as well as the Hearst strip area should, in our opinion, be developed primarily in apartment units with any commercial held to a minimum. Such development would permit the City to accommodate some of its future housing demand. The following items are the points upon which we based our opinion:

- Population growth: With the State of California and the Bay Area in particular increasing populationwise by thousands of people each month; the City of Berkeley will grow in population, also. Although the growth in Berkeley will be at a lesser rate than the Bay Area when all counties are considered collectively, it is estimated that the city will need approximately 15,600 to 18,600 dwelling units (see Table 6) by 1990 to house the increased population.

- Vacant land is almost impossible to find in Berkeley and because of its location, almost completely surrounded by other cities, there is no area that can be annexed for expansion purposes.

- Taking the Central station as a point of beginning and moving outward we note that the North and South Stations are relatively close, approximately one mile between the central station and the North Berkeley station and about one and one-half miles from the Central station to the South Berkeley station, placing each station almost within walking distance of the Central Business District.

- Any major commercial or office type development will, in all probability, take place near the Central station taking advantage of the station's proximity to the University of California and the Central Business District.

- Strengthening of the Central Business Core should be emphasized because the stations are so close together. Development of strong commercial areas at the other station sites would, in our opinion, weaken commercial potential and existing commercial elsewhere in the City.

- The availability of cleared land should be very attractive to developers providing some satisfactory solution to the parking situation can be found.

- It is impossible to assemble such large areas of land for development in the City of Berkeley unless through some Urban Renewal

program, which usually takes place in blighted areas of the community. In the event of some Urban Renewal program, the station sites would provide available locations for development of relocation housing. The City would recover the cost of buying the air rights by selling them for the acquisition cost, any addition in the selling price would be profit to the City. Likewise any reduction in the selling price would be temporary lost to the City, but this loss would be recovered within a relatively short time period from the taxes derived from the apartment developments on the various sites. An estimate of the return to the City of Berkeley from such developments can be seen in the Appendix at the end of this report.

North Berkeley Station: The North Berkeley Station, bordered by Sacramento Street on the east, Action Street on the west, Virginia Street on the north, and Delaware Street on the south (see Plate 2), is located in an area largely composed of older, single family homes that have been very well maintained. The community is very well mixed socially and economically and contains little evidence of mixed uses or conversions. A number of people in the neighborhood were interviewed and the general feeling of the residents is one of hope that the Rapid Transit facilities will not have a blighting influence upon the area, and that the introduction of the station will not cause severe changes in the make-up of their neighborhood. The residents are assuming a "wait and see" attitude in regard to the development of the Transit Station site. They will continue proper maintenance of their homes with the hope that the proposed development will add rather than detract from their neighborhood.

The population of the North Station area in 1965 was 12,230 residing in 4,800 dwelling units. This represents about 2.55 persons per dwelling unit which is somewhat less than the 2.68 average for the city. The median family income in 1960 was $6,503 which is slightly less than the city-wide median of $6,576, but much higher than the median income of the South Berkeley Station area (see Table 7).

Recommendations: The most feasible development of the N.B.S. air rights would include apartment units in the following sizes: 1-bedroom - 650 square feet; 2-bedroom - 800 square feet; 3-bedroom - 950 square feet. These dimensions include all necessary service and circulation spaces. We recommend a mix of predominately one and two bedroom units to take advantage of potential renters working at the University and in projected office and research development areas, which will develop around the downtown station. This group

RAPID TRANSIT ROUTE SHOWING STUDY AREAS

Table 7
SELECTED ECONOMIC AND PHYSICAL DATA
BERKELEY RAPID TRANSIT STATION SITES

Population	North Station	Downtown Station	South Station
Population (1965)	12,230	2,430	12,460
Population/Acre	34.6	26.3	47.4
Population/Dwelling Unit	2.55	1.52	2.8
Median Income	$6,503	$5,000	$4,849
Residential Inventory Dwelling Units	4,800	1,588	4,448
Dwelling Units/Acre	13.4	1.7	16.5

Land Use (1961)	Acres	Percent	Acres	Percent	Acres	Percent
Residential	302.5	84.0	16.2	17.5	217.7	80.6
Commercial	19.0	5.3	44.8	48.4	34.5	12.8
Industrial	1.3	0.4	2.4	2.6	3.0	1.1
Public	31.8	8.8	28.7	31.0	7.4	2.8
Sub-Total	354.6		92.1		262.6	
Vacant	5.4	1.5	0.5	0.5	7.3	2.8
Total	360.0	100.0%	92.6	100.0%	269.9	100.0%

Source: U. S. Census;
Berkeley Planning Department;
Development Research Associates

will be comprised of single persons and small family type creating a demand for smaller units. Rental schedules for such units with varying type of construction along with number of units is shown in Appendices 1-5. The monthly rental for units should be from $110 to $225 depending upon the number and type developed.

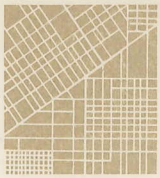
We do not feel that the north station air rights can be developed in the near future because of the complications connected with BART parking facilities and other construction problems. However, planning of the air rights development should be started early in order to assure that an imaginative and interesting complex will be constructed. A schedule for development and absorption is shown in Table 8.

The site around the entrance to the underground station should be developed as a community use area, which would serve as a nucleus for the apartment complexes. We recommend the development of a small plaza containing play areas for children, sitting and conversational areas for adults, as well as other park-related facilities. In addition, limited commercial uses such as drugstore, barber and beauty shop, photo shop, shoe repair, book store, camera shop, tobacco shop, short order restaurant and ice cream parlor. A maximum of 10,000 square feet should be used in housing these facilities.

Our studies indicate that the Hearst Avenue strip should be the first area developed for the following reasons: (1) the land is immediately available; (2) no demolition or relocation of families is required; (3) no conflict with BART parking site; (4) ideally located. Apartment construction in this area should be carefully staged so as to maintain the social and economic mix now existing in the community. A first stage development could begin in late 1969 or early 1970. This recommendation is based on the fact that rapid transit will be in operation at this time. In addition, the first stage development can set the tone for the development to follow in terms of design, impact on the community, and the kind of people it will attract. Apartments in this area should consist of mostly one and two bedroom units renting for $120-$225 per month.

The population characteristics of the Hearst Avenue strip are precisely the same as in the North Station area, for the two sites are immediately adjacent.

South Berkeley Station: The South Berkeley Station bordered by Tremont Street on the east, Grove Street on the west, Ashby Avenue on the north, and Woosley Street on the south (see Pl. 2), is located in an area of mixed uses; apartment buildings new and old, older single-family homes, and spot commercial uses. The station will be located one block from the South Berkeley commercial strip. The strip has a sufficient variety of commercial facilities, as follows: three bars, two banks, four cafes, a department store, two liquor stores, a jewelry store, a 5 & 10¢ store, two thrift-type stores, drugstores, and several other stores.



The station location enjoys direct access to the Eastshore Freeway, Warren Blvd. and south Ashby Avenue, which is a direct connection to the county areas, and the main commercial district in the city. Interviews with the merchants and residents of the South Berkeley community revealed the following:

> The merchants would not like to see a new commercial development at the Rapid Transit Station site. The City of Berkeley should protect merchants who have paid the taxes over the years.
>
> There is a need for moderately-priced dwelling units in the community and should be provided in some way.
>
> Something dramatic and exciting should be constructed to give the community identity.
>
> Whatever is constructed at the station site should generate a feeling of pride and give new life to the area.

The population of the South Station area in 1965 was 12,460 persons living in 4,849 dwelling units, approximately 2.8 to 3.0 persons per dwelling unit, slightly higher than the city average. However, the median family income in this area is less by approximately $1,600 than the North Station area. ~~See table 7.~~

Recommendations: The development of the South Berkeley Station air rights should include mostly two and three bedroom apartment units for moderate and middle income residents. Our studies indicate that approximately 60% of the units should satisfy moderate income families with the remaining 40% available to middle income tenants. High-rise apartments are not feasible because of the income range of residents in the South Station area.

A need for commercial development at the station site is not indicated, for the area now contains adequate commercial facilities to serve the present community and any additional development. For these reasons, large-scale commercial development should be discouraged at the South Berkeley station. The commercial facilities presently existing should be rehabilitated in order to increase their potential for attracting patronage.

SUMMARY AND CONCLUSIONS

In summarizing our study of the Berkeley transit sites the following points are pertinent:

1. Population growth in the Bay Area will continue and the population of Berkeley will follow this trend.

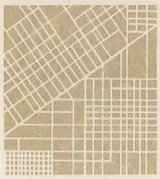
2. The introduction of rapid transit will significantly advance the population growth in terms of time of occurrence.

3. The City of Berkeley will need additional housing units to meet the population increase.

4. The North and South station air rights and the Hearst Strip are feasible locations for housing development.

5. Residents of the three study areas have expressed a need for housing for lower income levels. This does not include public housing. This desired social and economic mix can be accomplished if the selling price of the air rights and Hearst Strip area does not exceed the purchase price.

6. If lower rentals are desired on any units in this report, such can be obtained by reducing the selling price of the sites. Each rental may be reduced approximately $5.00 per month for each $100,000 reduction in selling price.



OTHER AREAS ALONG TRANSIT ROUTE

During the course of our investigation of the station sites as pointed out in our contract, we also noted the possibility of developing a right-of-way of Adeline Street. This street seems to be too wide for the use it receives. Within this 170-180 foot right-of-way we foresee two types of possible development.

One possibility would be the development of a small medical center, with two hospitals located near the transit line and stations; Herrick hospital on the west and Alto Bates hospital on the east of the transit line. Such a center could be developed in the area between the South Berkeley and Downtown Stations. Development of a medical center would provide new office space and eliminate the need of converting residential dwelling into office space as is the trend in some locations today.

Another possibility would be the development of an auto center complex. Because of the absence of space to expand and the increasing need for residential land for development, we feel that some of the auto dealers will be soon forced to relocate. Every effort should be made to keep them in the city. A portion of the right-of-way of Adeline Street could be used for such a development. The auto shopping center idea has proven so successful in the cities of Riverside and Seaside, California to both dealers and the city, that we recommend investigating the possibility of such a development in Berkeley.

APPENDIX

Appendix Table A-1
DEVELOPMENT ON AIR RIGHTS AT SOUTH BERKELEY
RAPID TRANSIT STATION, 14.9 ACRE SITE
(Rent Scales Alternatives)

	Alternative I			Alternative II			Alternative III			Alternative IV		
Number of Units	400[a]	400[b]	400[c]	500[a]	500[b]	500[c]	600[a]	600[b]	600[c]	700[a]	700[b]	700[c]
Rents:												
1-Bedroom	$120	$125	$140	$105	$115	$120	$105	$110	$120	$100	$105	$110
2-Bedroom	145	150	175	130	140	145	130	135	145	120	125	130
3-Bedroom	170	180	210	155	165	170	155	160	170	140	150	160
Gross Income	$700,000	$720,000	$840,000	$780,000	$840,000	$870,000	$935,000	$970,000	$1,040,000	$1,010,000	$1,050,000	$1,135,000
Less Taxes	193,500	201,500	212,000	220,000	234,000	244,000	260,000	248,000	288,000	276,000	292,000	309,000
Vacancies	5,800	6,000	7,000	5,200	7,000	7,200	7,800	8,100	8,700	8,400	8,700	9,400
Payment-Principal & Int. @ 6-1/2%	396,000	416,000	510,000	452,000	468,000	500,000	532,500	564,000	590,000	570,000	600,000	635,000
Maintenance & Insurance	40,000	42,000	51,000	45,000	47,000	50,000	53,000	56,000	59,000	57,000	60,000	63,000
PROFIT	$64,700	$54,500	$60,000	$57,800	$84,000	$68,700	$81,700	$93,900	$104,300	$98,600	$89,300	$118,600
Percentage of Investment	11.1%	8.9%	9.4%	8.9%	12.0%	9.4%	10.5%	11.4%	12.0%	11.9%	10.2%	12.5%
Costs:												
Land	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000	$600,000
Construction	4,800,000	4,800,000	4,800,000	5,500,000	5,500,000	5,500,000	6,600,000	6,600,000	6,600,000	7,000,000	7,000,000	7,000,000
Parking Area	420,000	700,000	980,000	525,000	875,000	1,225,000	780,000	1,050,000	1,470,000	735,000	1,225,000	1,715,000
Total	$5,820,000	$6,100,000	$6,380,000	$6,625,000	$6,975,000	$7,325,000	$7,830,000	$8,250,000	$8,670,000	$8,335,000	$8,825,000	$9,315,000

[a] Frame construction - parking surface and above ground level
[b] Frame construction - parking half above ground - half below
[c] Frame construction - parking all below ground

Source: Development Research Associates

Appendix Table A-2

DEVELOPMENT OF THE HEARST STRIP AREA
BERKELEY RAPID TRANSIT ROUTE, 14 0 ACRES
(Rent Scales Alternatives)

	Alternative I			Alternative II			Alternative III			Alternative IV		
Number of Units	400[a]	400[b]	400[c]	500[a]	500[b]	500[c]	600[a]	600[b]	600[c]	700[a]	700[b]	700[c]
Rents:												
1-Bedroom	$120	$125	$130	$110	$115	$120	$105	$115	$120	$100	$105	$110
2-Bedroom	150	155	160	135	140	150	130	140	145	120	130	135
3-Bedroom	180	185	190	160	165	180	155	165	170	140	155	160
Gross Income	$720,000	$745,000	$770,000	$810,000	$840,000	$900,000	$940,000	$1,020,000	$1,040,000	$1,010,000	$1,090,000	$1,140,000
Less Taxes	198,500	208,000	216,000	227,000	238,000	248,000	266,000	280,000	294,000	282,000	298,000	316,000
Vacancies	6,000	6,200	6,400	6,700	7,000	7,500	7,800	8,400	8,700	8,400	9,100	9,400
Payment-Principal & Interest @ 6-1/2%	406,000	426,000	446,000	462,000	486,000	510,000	545,000	575,000	600,000	575,000	615,000	645,000
Maintenance & Insurance	40,000	42,000	44,000	46,000	48,000	51,000	54,000	57,500	60,000	57,000	61,000	64,000
PROFIT	$69,500	$62,800	$57,600	$68,250	$61,000	$83,500	$67,200	$99,100	$77,300	$87,600	$106,900	$105,600
Percentage of Investment	11.6%	10.0%	8.8%	10.0%	8.5%	10.2%	8.5%	11.8%	8.7%	10.1%	11.8%	11.0%
Costs:												
Land	$750,000	$750,000	$750,000	$750,000	$750,000	$750,000	$750,000	$750,000	$750,000	$750,000	$750,000	$750,000
Construction	4,800,000	4,800,000	4,800,000	5,500,000	5,500,000	5,500,000	6,600,000	6,600,000	6,600,000	7,000,000	7,000,000	7,000,000
Parking Area	420,000	700,000	980,000	525,000	875,000	1,225,000	630,000	1,050,000	1,470,000	735,000	1,225,000	1,715,000
Total	$5,970,000	$6,250,000	$6,500,000	$6,775,000	$7,125,000	$7,475,000	$7,980,000	$8,400,000	$8,820,000	$8,485,000	$8,975,000	$9,465,000

[a] Frame construction - parking surface and above ground level
[b] Frame construction - parking half above - half below ground level
[c] Frame construction - parking all below ground

Source: Development Research Associates

Appendix Table A-3
DEVELOPMENT OF THE HEARST STRIP AREA
BERKELEY RAPID TRANSIT ROUTE, 14.0 ACRES
(Rent Scales Alternatives)

	Alternative I			Alternative II			Alternative III			Alternative IV		
Number of Units	400[a]	400[b]	400[c]	500[a]	500[b]	500[c]	600[a]	600[b]	600[c]	700[a]	700[b]	700[c]
Rents:												
1-Bedroom	$150	$155	$160	$145	$150	$160	$130	$135	$140	$115	$125	$135
2-Bedroom	185	190	200	180	185	195	160	165	175	140	155	165
3-Bedroom	220	230	240	210	220	230	190	195	210	165	185	195
Gross Income	$890,000	$912,000	$960,000	$1,080,000	$1,110,000	$1,140,000	$1,150,000	$1,190,000	$1,260,000	$1,175,000	$1,300,000	$1,390,000
Less Taxes	252,000	236,000	270,000	306,000	320,000	332,000	326,000	340,000	353,000	356,000	368,000	384,000
Vacancies	7,400	7,600	8,000	9,000	9,200	9,700	9,600	9,900	10,500	9,800	10,800	11,500
Payment-Principal & Interest @ 6-1/2%	515,000	535,000	554,000	633,000	655,000	677,000	667,000	695,000	725,000	720,000	755,000	788,000
Maintenance & Insurance	51,000	53,000	55,000	75,000	65,800	88,300	66,000	69,000	72,000	72,000	75,000	79,000
PROFIT	$64,600	$80,400	$73,000	$75,000	$65,800	$88,300	$81,400	$110,100	$99,500	$117,200	$91,200	$127,000
Percentage of Investment	8.6%	10.5%	9.0%	8.1%	6.9%	8.9%	8.3%	10.8%	9.4%	10.0%	8.3%	10 1%
Costs:												
Land	$750,000	$750,000	$750,000	$750,000	$750,000	$750,000	$750,000	$750,000	$750,000	$750,000	$750,000	$750,000
Construction	6,400,000	6,400,000	6,400,000	8,000,000	8,000,000	8,000,000	8,400,000	8,400,000	8,400,000	9,100,000	9,100,000	9,100,000
Parking Area	420,000	700,000	980,000	525,000	875,000	1,225,000	6,300,000	1,050,000	1,470,000	848,000	1,225,000	1,715,000
Total	$7,570,000	$7,850,000	$8,130,000	$9,275,000	$9,625,000	$9,975,000	$9,780,000	$10,200,000	$10,620,000	$10,698,000	$11,075,000	$11,565,000

[a] Fire proof construction (parking surface and above ground level)
[b] Fire proof construction (parking half above ground - half below ground)
[c] Fire proof construction (parking all below ground)

Source: Development Research Associates

Appendix Table A-4

DEVELOPMENT ON AIR RIGHTS AT NORTH BERKELEY
RAPID TRANSIT STATION, 9-ACRE SITE
(Rent Scales Alternatives)

	Alternative I			Alternative II			Alternative III			Alternative IV		
Number of Units	300[a]	300[b]	300[c]	400[a]	400[b]	400[c]	500[a]	500[b]	500[c]	600[a]	600[b]	600[c]
Rents:												
1-Bedroom	$115	$120	$125	$110	$120	$125	$100	$110	$115	$100	$110	$115
2-Bedroom	140	150	155	135	150	155	125	135	140	125	135	140
3-Bedroom	165	180	185	160	180	185	150	160	165	150	160	165
Gross Income	$505,000	$540,000	$560,000	$650,000	$720,000	$735,000	$750,000	$810,000	$840,000	$900,000	$972,500	$1,012,000
Less Taxes	143,000	150,000	158,000	168,000	196,000	207,000	214,000	224,000	234,000	254,000	268,000	282,000
Vacancies	4,200	4,500	4,600	5,400	6,000	6,200	6,200	6,700	7,000	7,500	8,100	8,400
Payment-Principal & Interest @ 6-1/2%	294,000	308,000	332,000	384,000	403,000	422,000	434,000	456,000	486,000	520,000	550,000	677,000
Maintenance & Insurance	29,000	30,000	33,000	38,000	40,000	42,000	43,000	46,000	49,000	52,000	55,000	68,000
PROFIT	$34,800	$47,500	$48,300	$54,000	$45,000	$57,800	$52,700	$77,000	$84,000	$66,500	$91,400	$76,600
Percentage of Investment	8.1%	10.5%	10.2%	9.6%	8.7%	9.4%	8.3%	11.5%	11.8%	8.5%	11.5%	9.0
Costs:												
Land	$400,000	$400,000	$400,000	$400,000	$400,000	$400,000	$400,000	$400,000	$400,000	$400,000	$400,000	$400,000
Construction	3,600,000	3,600,000	3,600,000	4,800,000	4,800,000	4,800,000	5,500,000	5,500,000	5,500,000	6,600,000	6,600,000	6,600,000
Parking Area	315,000	525,000	735,000	420,000	700,000	980,000	525,000	875,000	1,225,000	630,000	1,050,000	1,470,000
Total	$4,315,000	$4,525,000	$4,735,000	$5,620,000	$5,900,000	$6,180,000	$6,425,000	$6,775,000	$7,125,000	$7,630,000	$8,050,000	$8,470,000

[a] Frame construction - parking surface and above ground level
[b] Frame construction - parking half above ground - half below ground
[c] Frame construction - parking all below ground.

Source: Development Research Associates

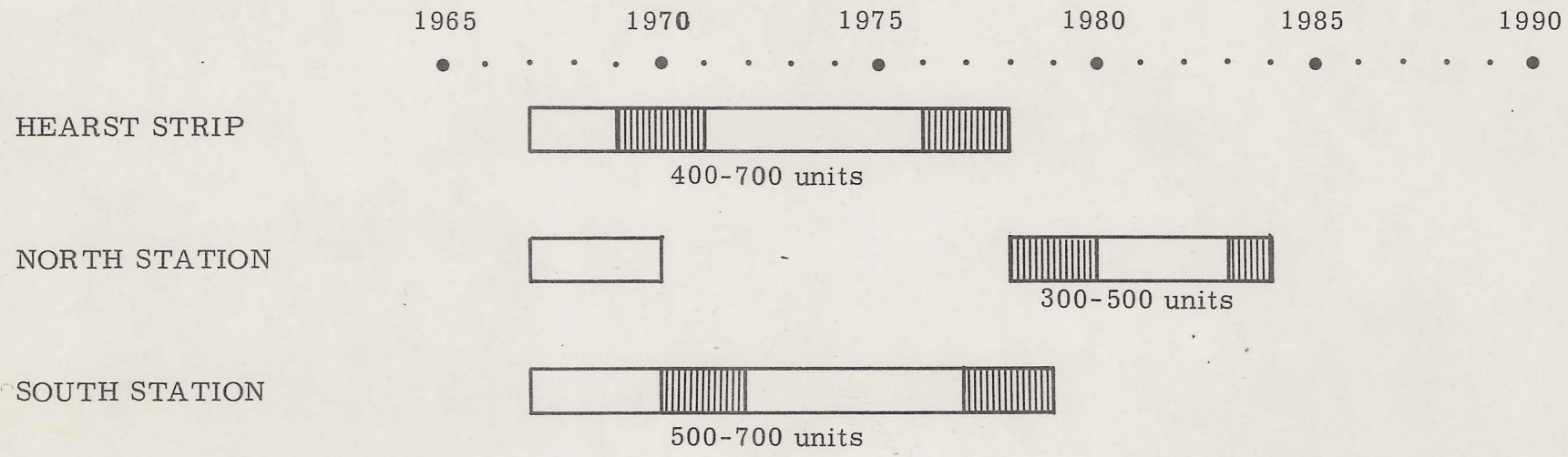
Appendix Table A-5
DEVELOPMENT ON AIR RIGHTS AT NORTH BERKELEY
RAPID TRANSIT STATION. 9-ACRE SITE
(Rent Scales Alternatives)

	Alternative I			Alternative II			Alternative III			Alternative IV		
Number of Units	300[a]	300[b]	300[c]	400[a]	400[b]	400[c]	500[a]	500[b]	500[c]	600[a]	600[b]	600[c]
Rents:												
1-Bedroom	$145	$155	$160	$145	$150	$155	$135	$140	$145	$130	$135	$140
2-Bedroom	180	190	195	180	185	190	165	175	180	160	165	170
3-Bedroom	210	220	230	210	220	230	195	210	215	190	195	200
Gross Income	$650,000	$685,000	$703,000	$865,000	$890,000	$915,000	$992,000	$1,050,000	$1,080,000	$1,150,000	$1,190,000	$1,220,000
Less Taxes	184,000	191,000	196,000	240,000	250,000	259,000	280,000	292,000	304,000	314,000	328,000	344,000
Vacancies	5,400	5,700	5,900	7,200	7,400	7,600	8,200	8,700	9,000	9,600	9,900	10,200
Payment-Principal & Interest @ 6-1/2%	376,000	390,000	404,000	492,000	510,000	530,000	575,000	598,000	621,000	642,000	672,000	700,000
Maintenance & Insurance	37,000	39,000	40,000	49,000	51,000	53,000	57,000	59,000	62,000	64,000	67,000	70,000
PROFIT	$47,600	$59,300	$57,100	$76,800	$71,600	$65,400	$71,800	$92,300	$84,000	$120,400	$113,100	$95,800
Percentage of Investment	8.5%	10.3%	9.7%	10.6%	9.5%	8.3%	8.5%	10.5%	9.2%	10.8%	11.5%	9.4
Costs:												
Land	$400,000	$400,000	$400,000	$400,000	$400,000	$400,000	$400,000	$400,000	$400,000	$400,000	$400,000	$400,000
Construction	4,800,000	4,800,000	4,800,000	4,800,000	4,800,000	4,800,000	7,500,000	7,500,000	7,500,000	7,500,000	7,500,000	7,500,000
Parking Area	315,000	525,000	735,000	420,000	700,000	980,000	525,000	875,000	1,225,000	630,000	1,050,000	1,470,000
Total	$5,515,000	$5,725,000	$5,935,000	$7,220,000	$7,500,000	$7,780,000	$8,425,000	$8,775,000	$9,125,000	$9,430,000	$9,850,000	$10,270,000

[a]Fire proof construction (parking surface and above ground level)
[b]Fire proof construction (parking half above ground - half below ground)
[c]Fire proof construction (parking all below ground)

Source: Development Research Associates

Table 8
DEVELOPMENT SCHEDULE
BERKELEY RAPID TRANSIT AIR RIGHT SITES



Source: Development Research Associates

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